

PUV3402

LED Process Photometer



Measurements for the hydrocarbon processing and chemical industry

Measurement made easy

PUV3402 LED

Overview

The ABB Multiwave PUV3402 LED process photometer is used in the hydrocarbon processing industry and the chemical industry for measurements that are used for process control, environmental compliance and safety measurements. The range of the measurements can be from ppm level to high percent levels and can be made in either vapor or liquid samples.

Features

The ABB PUV3402-LED builds from the successful PUV3402. The PUV3402 LED uses long life wavelength specific Light Emitting Diodes (LED) in the UV and Visible spectral regions to provide both the measure and reference wavelengths. This eliminates the traditional moving part of the filter wheel, which reduces the maintenance requirements of the analyzer. The LED source provides a UV analyzer with a low zero rate, and thus significantly extends the time between calibrations.

PUV3402 LED Multiwave Process Photometer

Applications for process control, environmental compliance and safety measurements

Specification

Environmental (Enclosure)
Protected from direct sunlight and rain: IP 52

Ambient Temperature
Range 0 to +45 °C (32 to 113 °F)

Humidity
95% relative humidity, non-condensing

Dimensions (W x D x H)
254 mm x 266.7 mm x 342.9 mm x 681.0 to 1665.0 mm L*
10.0 in. x 10.5 in. x 13.5 in. x 26.8 to 65.5 in L*)
* Dependent on cell pathlength

Weight
36.28 kg (80 lbs) (minimum, configuration dependent)

Mounting
Wall

EMI/RFI Considerations
Conform to Class A industrial environment

Electrical Entries
Top and Bottom

Tube Fittings

Sample Inlet/Outlet
Size: ¼" Standard Gyrolok (Swagelok optional)
Material: 316SS, Monel, Hastelloy C

Purge Inlet & Outlet
Size: ¼" NPT-F Gyrolok
Material: 316 SS

Output Signals

Analog
4 ea. 4 to 20 mA isolated into 600 ohms max.

Contact Closures
2 each Relay, 3W at 0.25,
5 each Isolated solid state
Both Relay and solid state contact closures
N.O. or N.C.

Digital Outputs
4 ea. 110VDC, 25 watts each

Digital Inputs
8 ea. 2 ea. are dedicated

Power

Size
18 AWG, ¾" Conduit hub

Type
3 conductors each

Performance

Precision
± 1% of full scale

Noise
± 1% of full scale

Linearity
± 2% of full scale

Zero drift
± 1% of full scale

Response time
Programmable

Ambient electronic stability
± 1% of full scale for 10 °C (18 °F) in 4 hours

Operating Specifications

Wavelength range	280 nm to 800 nm
Ambient temperature range	0 to +45 °C (32 to 113 °F)
Electronic cell heat maximum cell heat	150 °C (302 °F)
Power consumption	450 watts maximum
Sample flow rate	Typical for vapors – 20 to 500 cc/min Typical for liquids – 5 to 120 cc/min
Sample pressure	0 to 500 psig (0 to 34 bar)
Voltage input variation	10% fluctuation without causing an output of variation of 0.05% of full scale

Safety area classification

NEC/NRTL	Class I, Division 2; Gas Groups B, C, D without enclosure purge Class I, Division 1; Gas Groups B, C, D with Y type enclosure purge
CSA	Class I, Division 2; Gas Groups B, C, D with Z type enclosure purge Class I, Division 1; Gas Groups B, C, D with X type enclosure purge
ATEX	CE Zone 2: II3G, EEx pz IIB+H2 T4 to T2 CE Zone 1 : II2G, EEx pd[ib] IIB+ H2 T4 to T2 (LCIE 03 ATEX 6007X)

Power

Voltage	100 to 240 VAC
Frequency	45 to 66 HZ
Power consumption	150 Watts maximum power consumption 600 Watts Maximum power consumption with electric cell heat

Purge gases

Instrument air for enclosure purge	¼ inch tube, minimum
Supply pressure	40 to 80 psi (3 to 6 bars)
Flow rate	0.5 CFM (15 LPM)
Optical purge	Typically Nitrogen
Supply pressure	15 to 30 psi (1 to 2 bars)
Flow rate	10 to 15 cc / min

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